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Pulmonary Hypertension

PERICARDIAL EFFUSIONS IN PULMONARY HYPERTENSION: PRESENTATION, PREDICTORS & OUTCOMES

ACC Moderated Poster Contributions

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Session Title: Pulmonary Hypertension Prognosis/Outcomes

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Background: Presence of pericardial effusion (PCE) is associated with worse prognosis in patients with pulmonary hypertension (PHTN). The impact of PCE in PHTN is not well characterized.

Methods: Retrospective review of all consecutive pts undergoing right heart catheterization at our institute from 2007 to 2011. Baseline characteristics, clinical variables echocardiographic features and hemodynamic data was collected and compared between pts with and w/o PCE.

Results: Of the 295 pts with PHTN, 36 (12%) had PCE. Of them 13 had trace PCE, 15 had small, 3 had moderate and 1 had large PCE at right heart catheterization which progressed to large effusions without clinical or echo evidence of tamponade. There was no significant difference in the mean age, gender distribution, prevalence of hypertension, diabetes, coronary artery disease, mitral regurgitation, mean LVEF and pulmonary capillary wedge pressure between patients with and without PCE. Pts with PCE had a significantly enlarged right atrium ($p=0.003$), impaired right ventricular systolic function ($p<0.001$), higher prevalence and worse tricuspid regurgitation ($p<0.001$) and elevated mean pulmonary artery pressure ($p=0.001$). After a mean follow up of 8 months none needed drainage of PCE.

Conclusions: PCE in pts with PHTN is primarily a reflection of right heart overload and rarely requires an intervention.

Table: Comparison of patients with and without pericardial effusion

Clinical Variables	No Pericardial Effusion (n= 259)	Pericardial Effusion (n=36)	Total (n=295)	p value
Age in years (%)	60.84	56.54	60.32	0.085
Female Sex (%)	163 (63)	25 (69)	188 (64)	0.430
Diabetes Mellitus (%)	83 (32)	6 (17)	89 (30)	0.063
Hypertension (%)	180 (69)	21 (60)	201 (68)	0.286
COPD(%)	45 (18)	4 (8)	49 (17)	0.331
Coronary artery disease (%)	117 (45)	18 (51)	135 (46)	0.450
Obstructive sleep apnea (%)	84 (33)	6 (7)	90 (31)	0.062
Impaired RV systolic Function (%)	75 (32)	25 (76)	100 (37)	<0.001
RA Enlargement (%)				0.003
Mild	62 (24)	5 (14)	67 (23)	
Moderate	55 (22)	14 (39)	69 (24)	
Severe	28 (11)	9 (25)	37 (13)	
Tricuspid Regurgitation (%)				<0.001
Mild	121 (46)	11 (31)	132 (44)	
Moderate	66 (25)	10 (28)	76 (26)	
Severe	28 (11)	14 (39)	42 (14)	
mpAP in mmHg	45.10	56.72	46.49	0.001
mpAP grade				0.001
25-39	98 (37)	7 (19)	105 (35)	
40-59	98 (37)	7 (19)	103 (34)	
>60	50 (19)	17 (47)	67 (22)	
LV Ejection Fraction <50mmHg	55 (21)	9 (26)	64 (22)	0.555
PCWP >15 mmHg	164 (66)	22 (69)	186 (67)	0.790
PCWP (mean)	18.71	19.63	18.81	0.590